Patent
Attorney's Docket No. 032230-042

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	)	
	)	
Mehul Patel, et al.	)	Group Art Unit: 2876
	)	
Application No.: Unassigned Divisional of 09/174,466	)	Examiner: K. Frech
	)	
Filed: June 5, 2001	)	
	)	
For: OPTICAL CODE READER FOR MEASURING PHYSICAL PARAMETERS OF OBJECTS (AS AMENDED)	)	

09979974.060502

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-captioned patent application, kindly enter the following amendments.

TITLE PAGE:

Kindly replace the list of inventors' names on the title page with the following list:

--MEHUL PATEL

THOMAS BIANCULLI

PAUL POLONIEWICZ

DUANFENG HE

EUGENE JOSEPH--

Please replace the title with the following:

--OPTICAL CODE READER FOR MEASURING PHYSICAL PARAMETERS OF OBJECTS--

IN THE SPECIFICATION:

Page 1, before the first line, insert

--This application is a divisional of Application No. 09/174,466, filed on 10/19/98.--

IN THE CLAIMS:

Please cancel claims 6-15 and 22-35 without prejudice and add the following new claims:

--36. (New) An imaging system for measuring an orthogonal dimension of a rectangular solid object in a field of view of an imager, comprising:

means for obtaining pixel information for the field of view of the imager;

means for determining a distance between the object and the imager; and

means for determining the angles between edges of the rectangular solid meeting at a corner of the object, determining an imaged length of at least one of the edges of the rectangular solid and scaling the determined image length of the at least one edge responsive to the determined angles and determined distance between the rectangular solid and the imager to obtain an approximation of the actual length of said at least one edge of the object.

37. (New) The apparatus of claim 36, wherein the distance determining means includes an optical device for projecting a pattern onto the object and wherein the distance between the object and the imager is determined from a detected image of the pattern projected onto the object.

38. (New) The apparatus of claim 36, wherein the distance between the object and the imager is determined from at least one image dimension of an optical code symbol of known size on the object.

39. (New) The apparatus of claim 36, wherein the imager is a handheld imaging optical code reader.

40. (New) The apparatus of claim 36, wherein the apparatus determines the image length and actual length of three edges meeting at a nearest corner of the object.

41. (New) An imaging system for reading optical code and measuring a dimension of one or more features in a field of view of the system, comprising:

an image sensor having a field of view;

a pattern projector for projecting a pattern into the field of view;

an electronic processor receiving image information from the image sensor for detecting and decoding optical code in the field of view of the image sensor and for

producing a signal related in value to the dimension of the one or more features in the field of view based on image information relating to at least a portion of the projected pattern.

42. (New) The system of claim 41 further comprising a weighing platform on which the pattern is projected, which platform moves in response to the weight placed thereon, and wherein a signal responsive to the amount of movement of the platform is determined based on image information.

43. (New) The system of claim 42, wherein the weight of an object on the platform is calculated from the value of the signal.

44. (New) The system of claim 1, wherein measurement of movement of the platform is determined from image data relating to indicia marked on the platform.--

IN THE ABSTRACT:

Please replace the Abstract with the following:

--Imaging optical code readers and imaging systems are disclosed for measuring or deriving physical parameters of objects in a field of view such as object dimensions and weights. A projected pattern and weight responsive platform may be used in such measurements.--

REMARKS

This divisional application retains claims 1-5 and 16-21 constituting Group I of a Restriction Requirement made in the Official Action of April 12, 2000 in the parent application. The claims relate to various imaging optical code readers and/or imaging systems for measuring or deriving physical parameters of objects in a field of view such as object dimensions and weights. New claims 36-44 have been added within this same Group.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: ______________________
Samuel C. Miller, III
Registration No. 27,360

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: June 5, 2001

09873374.060501

Attachment to Preliminary Amendment dated June 5, 2001

Marked-up Copy

Title Page, inventors names:

MEHUL PATEL
[DUANFENG HE]
THOMAS BIANCULLI
PAUL POLONIEWICZ
DUANFENG HE
EUGENE JOSEPH
[PAUL POLONIEWICZ
MARK CORREA
THOMAS BIANCULLI
HOWARD SHEPARD]

Title Page, Title:

OPTICAL CODE READER FOR [PRODUCING VIDEO DISPLAYS AND] MEASURING PHYSICAL PARAMETERS OF OBJECTS

In the Abstract:

[An imaging optical code reader is adapted for use in producing video displays and for use in motion detection surveillance using video compression and narrow band width communication links. An optical system including a plane parallel plate may be employed to change the system focal distance. The imaging optical code reader is also adapted for measurement of physical parameters of a target object including motion, distance, weight and dimensions.] Imaging optical code readers and imaging systems are disclosed for

Attachment to Preliminary Amendment dated June 5, 2001

Marked-up Copy

measuring or deriving physical parameters of objects in a field of view such as object dimensions and weights. A projected pattern and weight responsive platform may be used in such measurements.

DOCKET NO. 032230-042